


**EPA**



## Applying the Framework: Implementing Technical Solutions



Indoor Air Quality (IAQ)

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**Day 1: Afternoon** – Installing the Best Technical Solutions

ACTION KIT

- ★ HVAC
- ★ Moisture/Mold
- ★ IPM
- ★ Cleaning & Maintenance
- ★ Materials Selection
- ★ Source Control





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### The Framework for Effective School IAQ Management



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The Framework for Effective School IAQ Management:  
**Six Technical Solutions**



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The Framework for Effective School IAQ Management:

**Six Technical Solutions**

**Quality HVAC**

- Inspect HVAC systems regularly
- Establish a maintenance plan
- Change filters regularly and ensure condensate pans are draining
- Provide outdoor air ventilation according to ASHRAE Standard or local code
- Clean air supply diffusers, return registers, and outside air intakes
- Keep unit ventilators clear of books, papers, and other items

**Control of Moisture/Mold**

- Conduct routine moisture inspections
- Establish mold prevention and remediation plan
- Maintain indoor humidity levels between 30% and 60%
- Address moisture problems promptly
- Dry wet areas within 24-48 hours

**Strong Integrated Pest Management (IPM)**

- Inspect and monitor for pests
- Establish an IPM plan
- Use spot treatments and baits
- Communicate with occupants prior to pesticide use
- Mark indoor and outdoor areas treated with pesticides



**Effective Cleaning & Maintenance**

- Conduct routine inspections of school environment
- Develop a preventative maintenance plan
- Train cleaning/maintenance staff on protocols
- Ensure material safety data sheets (MSDS) are available to staff
- Clean and remove dust with damp cloth
- Vacuum using high-efficiency filters

**Smart Materials Selection**

- Maintain products inventory
- Develop low-emitting products purchasing and use policies
- Use only formaldehyde-free materials
- Use only low-toxicity and low-emitting paint
- Select products based on product rating systems
- Use least toxic cleaners possible (only those approved by the district)

**Aggressive Source Control**

- Conduct regular building walkthrough inspection
- Test for radon, mitigate if necessary
- Implement a hazardous materials plan (use, label, storage and disposal)
- Establish a school chemical management and inventory plan
- Implement Smoke-Free policies
- Establish an anti-liding school bus policy
- Use walk-off mats at building entrances
- Conduct pollutant-releasing activities when school is unoccupied



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**5 Minute Mentor**

Technical Solution	Faculty	IAQ Design Challenge School District
HVAC	Blue Valley	Philadelphia
Mold and Moisture	Charlotte	Schodack
Integrated Pest Management	Charlotte	New Orleans
Cleaning and Maintenance	NEISD	New Orleans
Materials Selection	NEISD	Memphis
Source Control	Blue Valley	Lake Zurich



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## 5 Minute Mentor

How to Listen:

- What new strategies and approaches are the Faculty Programs presenting?
- What Effective Questions from the Design Challenge School Districts relate to your challenges?
- Use the chart in your Guidebook to write down strategies and additional questions.



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### Quality HVAC

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### What is your school system's command of Quality HVAC?

1. Out of control, poor IAQ
2. Weak system, problem areas
3. Workable system, can be improved
4. Able to maintain effective system



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**Control of Moisture/Mold**

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**ACTION KIT**

- \* HVAC
- \* Moisture/Mold
- \* IPM
- \* Cleaning & Maintenance
- \* Materials Selection
- \* Source Control



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**What is your school system's command of Control of Moisture/Mold?**

1. Out of control, poor IAQ
2. Weak system, problem areas
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**Strong Integrated Pest Management (IPM)**

- Inspect and monitor for pests
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**ACTION KIT**

- \* HVAC
- \* Moisture/Mold
- \* IPM
- \* Cleaning & Maintenance
- \* Materials Selection
- \* Source Control



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**What is your school system's command of Strong Integrated Pest Management?**

1. Out of control, poor IAQ
2. Weak system, problem areas
3. Workable system, can be improved
4. Able to maintain effective system



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**Effective Cleaning & Maintenance**

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**What is your school system's command of Effective Cleaning and Maintenance?**

1. Out of control, poor IAQ
2. Weak system, problem areas
3. Workable system, can be improved
4. Able to maintain effective system



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### Smart Materials Selection

- Maintain products inventory
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### What is your school system's command of Smart Materials Selection?

1. Out of control, poor IAQ
2. Weak system, problem areas
3. Workable system, can be improved
4. Able to maintain effective system



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### Aggressive Source Control

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- Conduct pollutant-releasing activities when school is unoccupied



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**What is your school system's command of Aggressive Source Control?**

1. Out of control, poor IAQ
2. Weak system, problem areas
3. Workable system, can be improved
4. Able to maintain effective system



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**Overall, what is your school system's command of the Technical Solutions?**

1. Out of control, poor IAQ
2. Weak system, problem areas
3. Workable system, can be improved
4. Able to maintain effective system



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***Get Ready to Put Your Learning into Action!***



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Thank You!  
2010 Design Challenge School Districts



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### Day 2 – The Collaborative Design Process



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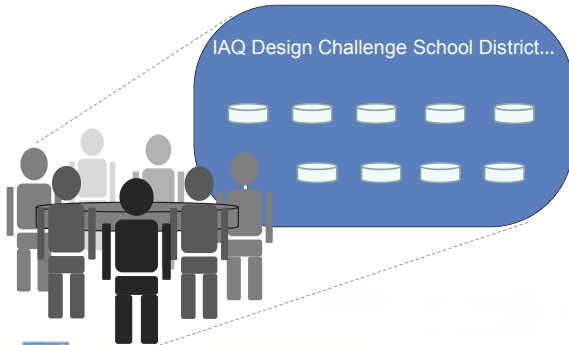
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### IAQ Collaborative Design Teams



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## 2011 IAQ Design Challenge School Districts

### New

- **Ponca City Public Schools**, *Ponca City, OK*
- **Richmond County School System**, *Augusta, GA*
- **West Chester Area School District**, *West Chester, PA*

### Returning – 2010

- **Louisiana Recovery School District**, *New Orleans, LA*
- **The School District of Philadelphia**, *Philadelphia, PA*



Quality | IAQ

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## Meet Your IAQ Design Challenge School District!

Use your badge to identify your team by color and number.

- **Ponca City Public Schools**, *Ponca City, OK* – **Red**
- **Richmond County School System**, *Augusta, GA* – **Green**
- **West Chester Area School District**, *West Chester, PA* – **Orange**
- **Louisiana Recovery School District**, *New Orleans, LA* – **Yellow**
- **The School District of Philadelphia**, *Philadelphia, PA* – **Blue**



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## Concurrent Sessions

Session	Location
Using IAQ as a Teaching and Learning Tool in Your District	Independence FGHI
Radon Management in Schools	Lafayette/Farragut
Asthma Management in Schools	Independence BCDE
Overcoming Obstacles: Funding Your IAQ Management Program	Conference Theatre



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## Concurrent Sessions

How to Listen:

- What successful technical strategies are you hearing that address your Effective Questions?
- Use the chart in your Guidebook to write down any overall insights you hear in the concurrent session.
- Indicate which Technical Solution each applies to.



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## Creating Effective Questions

- **“What” or “How”**
- **Not “Why”**
- **Generate Alignment**
- **Can’t be Answered “Yes” or “No”**
- **Invite Discovery**

Enlightened Leadership



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## Some Effective Questions

- **What’s Working?**
- **What Causes it to Work?**
- **How Can We Adapt & Use Their Approach?**
- **What Excites you the Most About Her Talk?**
- **What Can You Do to Improve the Situation?**
- **How Can We Learn How to Do This?**
- **What Are the Benefits of This Approach?**



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